

## CLAIMS

What is claimed and desired to be secured by Letters Patent is:

1. A method of transmitting auxiliary data in video encoding comprising:  
receiving first and second data;  
encoding said first data based on a state of at least one bit of said second data; and  
packaging said encoded first data and said second data into a single word; and  
communicating said single word.
2. The method of claim 1, further comprising DC balancing said first data.
3. The method of Claim 1, wherein encoding said first data further comprises determining whether said first data should be inverted.
4. The method of Claim 3, wherein encoding said first data further comprises comparing a state of inversion of said first data to said state of said at least one bit of said second data.
5. The method of Claim 4, wherein encoding said first data further comprises inverting said first data if said state of inversion of said first data does not match said state of said at least one bit of said second data.
6. The method of Claim 4, wherein encoding said first data bit further comprises not inverting said first data if said state of inversion of said first data matches said state of said at least one bit of said second data.

7. The method of Claim 1, wherein encoding said first data comprises determining an intermediate value for said first data.

8. The method of Claim 7, wherein encoding said first data further comprises comparing said intermediate value to at least one bit of audio data.

9. The method of Claim 8, wherein encoding said first data further comprises encoding said first data and said audio data if said state of inversion of said first data bit is equal to said at least one bit of audio data.

10. The method of Claim 7, wherein encoding said first data further comprises inverting said first data if said state of inversion of said first data does not match said state of said at least one bit of audio data.

11. The method of Claim 10, wherein encoding said first data further comprises encoding said inverted first data and said at least one bit of audio data.

12. A method of balancing a code word in a video encoder comprising:  
receiving data;  
determining a desired state of said data; and  
encoding said data based on the desired state of the data.

13. A method of balancing a code word in video encoder comprising:  
 receiving data;  
 determining a desired state of said data;  
 selecting a logic operation that will result in a state closest to said desired state; and  
 performing said selected logic operation on at least a portion of said data.

14. The system of Claim 13, wherein performing said logic operation comprises performing an exclusive nor operation.

15. The system of Claim 13, wherein said desired state includes data having a strong 1 presence.

16. The system of Claim 13, wherein performing said logic operation comprises performing an exclusive or operation.

17. The system of Claim 13, wherein said desired state includes data having a strong 0 presence.

18. A system for transmitting auxiliary data in video encoding comprising:  
 a receiver adapted to receive first and second data;  
 an encoder adapted to encode said first data based on at least one bit of said second data;  
 a packaging device adapted to package said encoded first and second data into a single word; and  
 a communication device adapted to communicate said single word.

19. A system for transmitting auxiliary data in video encoding comprising:

an un-enhanced encoder;

an enhanced encoder;

an un-enhanced decoder adapted to communicate with said un-enhanced and enhanced encoders; and

an enhanced decoder adapted to communicate with said un-enhanced and enhanced encoders.

20. The system of Claim 19, wherein said enhanced decoder is adapted to communicate enhanced data word.

21. The system of Claim 19, wherein said un-enhanced encoder is adapted to communicate un-enhanced data word.